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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,818	05/13/2005	Yusuke Tatara	052552	7064
38834 7590 06/15/2007 WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP 1250 CONNECTICUT AVENUE, NW SUITE 700 WASHINGTON, DC 20036				
			EXAMINER LE, DAVID D	
			ART UNIT 3681	PAPER NUMBER
			MAIL DATE 06/15/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/534,818

**Applicant(s)**

TATARA ET AL.

**Examiner**

David D. Le

**Art Unit**

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 is/are allowed.
- 6) ☒ Claim(s) 7-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This is the second Office action on the merits of Application No. 10/534,818, filed 13 May 2005. Claims 1-11 are pending.

### **Documents**

2. The following documents have been received and filed as part of the patent application:
  - A copy of the Certified Copy of Foreign Priority Document, received on 05/13/05
  - Information Disclosure Statement, received on 05/13/05
  - Information Disclosure Statement, received on 07/13/05

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 7-11 are rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Patent No. 6,342,027 to Suzuki.**

Claims 7-11:

**Suzuki** (Figs. 1-4; column 1, line 52 – column 11, line 53) discloses a hybrid motive power vehicle comprising:

- An engine (i.e., Fig. 1, element 2);
- A motor (i.e., Fig. 1, element 1);
- An output shaft (i.e., Fig. 1, element 11);
- A clutch device (i.e., Fig. 1, element 5) provided between the engine and motor and the output shaft and adapted to selectively disconnect the driving powers of the engine and motor from the output shaft;
- A clutch control device (i.e., Fig. 1, element 18) operatively connected to the clutch device for controlling the engagement degree of the clutch device when the driving mode of the vehicle is alternately switched between the engine cruise mode and the motor cruise mode (i.e., Figs. 3 and 4; column 6, line 13 – column 9 line 64);
- Wherein the clutch control device is adapted to execute a clutch relaxation control operation when the driving mode of the vehicle is switched between the engine cruise mode and the motor cruise mode, which includes an engagement decreasing control operation in which the engagement degree of the clutch device is decreased, and a subsequent engagement recovery control operation in which the engagement degree of the clutch device is gradually increased and recovered, and is further adapted to control the engagement degree of the clutch device

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depending on the revolution rate of the engine (i.e., Figs. 3 and 4; column 6, line 13 – column 9 line 64);

- Wherein the control operation for the engagement degree of the clutch device, which is executed depending on the revolution rate of the engine, is executed within a predetermined period that begins at the beginning of the clutch relaxation control operation, and the engagement recovery control operation is executed after the predetermined period has passed (i.e., Figs. 3 and 4; column 6, line 13 – column 9 line 64);
- Wherein, since the clutch device is a hydraulic type wet clutch, the engagement degree of the clutch device is inherently changed in accordance with a clutch oil pressure correction coefficient which is determined in advance depending on revolution rate of the engine (i.e., column 5, lines 35-39);
- Wherein the clutch oil pressure correction coefficient is inherently set higher so as to increase the engagement degree of the clutch device as the revolution rate of the engine decreases; and
- Wherein the hybrid vehicle comprises an automatic transmission (i.e., Fig. 1, element 4; column 4, lines 52-53), and the clutch device is considered as a starting clutch provided for the automatic transmission.

**5. Claims 7-11 are rejected under 35 U.S.C. 102(e) as being anticipated by U. S. Patent No. 6,988,572 to Tatara et al.**

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Note:

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Claims 7-11:

**Tatara** (Figs. 1-14; column 4, line 45 – column 23, line 43) discloses a hybrid vehicle comprising:

- An engine (i.e., Fig. 1, element 2);
- A motor (i.e., Fig. 1, element 3);
- An output shaft (i.e., Fig. 1, elements 13a and 13b);
- A clutch device (i.e., Fig. 1, element 12) provided between the engine and motor and the output shaft and adapted to selectively disconnect the driving powers of the engine and motor from the output shaft;

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- An electrical control device (i.e., Fig. 1, element 19) operatively connected to the clutch device for controlling the engagement degree of the clutch device when the driving mode of the vehicle is alternately switched between the engine cruise mode and the motor cruise mode (i.e., column 7, line 6 – column 23 line 9);
- Wherein the electronic control device is adapted to execute a clutch relaxation control operation when the driving mode of the vehicle is switched between the engine cruise mode and the motor cruise mode, which includes an engagement decreasing control operation in which the engagement degree of the clutch device is decreased, and a subsequent engagement recovery control operation in which the engagement degree of the clutch device is gradually increased and recovered, and is further adapted to control the engagement degree of the clutch device depending on the revolution rate of the engine (i.e., column 7, line 6 – column 23 line 9);
- Wherein the control operation for the engagement degree of the clutch device, which is executed depending on the revolution rate of the engine, is executed within a predetermined period that begins at the beginning of the clutch relaxation control operation, and the engagement recovery control operation is executed after the predetermined period has passed (i.e., column 7, line 6 – column 23 line 9);
- Wherein, since the clutch device is a hydraulic type wet clutch, the engagement degree of the clutch device is changed in accordance with a clutch oil pressure

correction coefficient which is determined in advance depending on revolution rate of the engine (i.e., column 7, line 6 – column 23 line 9);

- Wherein the clutch oil pressure correction coefficient is inherently set higher so as to increase the engagement degree of the clutch device as the revolution rate of the engine decreases (i.e., column 7, line 6 – column 23 line 9); and
- Wherein the hybrid vehicle comprises an automatic transmission and the clutch device is a starting clutch provided for the automatic transmission (i.e., Fig. 1).

#### *Allowable Subject Matter*

6. Claims 1-6 are allowed.

#### *Response to Arguments*

7. Applicant's arguments filed on 19 March 2007 with respect to claims 7-11 have been fully considered but they are not persuasive.

First, applicants argue that Suzuki reference does not disclose a method for switching from driving by the engine to driving by the motor. Examiner respectfully disagrees for the reason that the argument does not accurately reflect the claimed invention as recited in the present claims 7-11. More specifically, the present claims 7-11 are currently directed to a clutch control apparatus for a hybrid vehicle, not a method for switching from driving by the engine to the driving by the motor. Furthermore, the present independent claim 7 only requires the clutch control device to be adapted to execute a clutch relaxation control operation when the driving



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mode of the vehicle is switched between engine cruise mode and the motor cruise mode; the present independent claim 7 does not specifically require the clutch control device to switch from the driving by the engine to driving by the motor; and, the clutch 5 of Suzuki, as set forth in paragraph 4 above, is capable of performing the functions as recited in claims 7-11.

Second, applicants argue that Suzuki does not disclose or suggest that the engagement degree of the clutch device is gradually increased and recovered, as required by claim 7.

Examiner respectfully disagrees because the clutch 5 of Suzuki is a slip clutch, which performs the half-clutch engagement function, not a positive engagement clutch; and therefore, clutch 5 of Suzuki inherently includes some degree of gradual engagement.

Accordingly, as set forth above, Suzuki reference meets the claimed limitations.

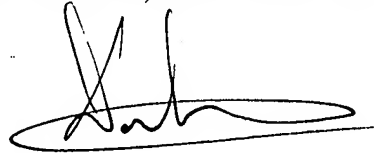
### *Conclusion*

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 571-272-7092. The examiner can normally be reached on Mon-Fri (0700-1530).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'David D. Le', with a horizontal line underneath.

David D. Le  
Primary Examiner  
Art Unit 3681  
06/10/2007

ddl